

CLAIMS

What is claimed is:

1. A method for promoting cardiac tissue repair comprising administering to the cardiac tissue a therapeutically effective amount of an angiogenic thrombin derivative
5 peptide.
2. The method according to Claim 1 wherein said peptide comprises a thrombin receptor binding domain having the sequence Arg-Gly-Asp-Ala (SEQ ID NO. 1); and a serine esterase conserved sequence.
3. The method of Claim 2 wherein the serine esterase conserved sequence comprises
10 Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 2).
4. The method of Claim 2 wherein the thrombin derivative peptide comprises the amino acid sequence: Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 3).
5. The method of Claim 1 wherein the thrombin derivative peptide consists of the
15 amino acid sequence Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 4).
6. The method of Claim 1 wherein the peptide is administered during or following
cardiac surgery.
7. The method of Claim 1 wherein the peptide is administered by injection into the
20 cardiac tissue.

8. The method of Claim 1 wherein a sustained release formulation comprising the angiogenic thrombin derivative peptide is administered to the cardiac tissue.
9. The method of Claim 8 wherein the sustained release formulation is a polylactic acid/polyglycolic acid microparticles comprising the angiogenic thrombin derivative peptide
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10. A method of stimulating revascularization comprising administering to cardiac tissue a therapeutically effective amount of an angiogenic thrombin derivative peptide.
11. A method of stimulating vascular endothelial cell proliferation in a patient in need of such treatment comprising administering to the patient a therapeutically effective amount of an angiogenic thrombin derivative peptide.
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12. A method of inhibiting restenosis in a patient following balloon angioplasty, said method comprising administering to the patient a therapeutically effective amount of an angiogenic thrombin derivative peptide.
13. The method of Claim 12 wherein the peptide is coated onto a balloon angioplasty catheter.
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14. The method of Claim 12 wherein the angiogenic thrombin derivative peptide is administered systemically.
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16. The method of Claim 12 wherein the angiogenic thrombin derivative peptide is administered locally to a balloon induced damaged area of a blood vessel.
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16. The method of Claim 12 wherein a stent coated with the angiogenic thrombin derivative peptide is inserted into a blood vessel at a balloon induced damaged area.

17. The method of Claim 12 wherein said peptide comprises a thrombin receptor binding domain having the sequence Arg-Gly-Asp-Ala (SEQ ID NO. 1); and a serine esterase conserved sequence.
18. The method of Claim 17 wherein the serine esterase conserved sequence comprises
5 Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 2).
19. The method of Claim 17 wherein the thrombin derivative peptide comprises the amino acid sequence: Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 3).
20. The method of Claim 12 wherein the thrombin derivative peptide consists of the
10 amino acid sequence Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID NO. 4).
21. A stent coated with an angiogenic thrombin derivative peptide.
22. A method of inhibiting vascular occlusion in a patient, said method comprising
15 administering to the patient a therapeutically effective amount of a thrombin derivative peptide.